



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
25.04.2018 Bulletin 2018/17

(51) Int Cl.:
A47B 5/04 (2006.01)

(21) Application number: **17184016.8**

(22) Date of filing: **31.07.2017**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME
Designated Validation States:
MA MD

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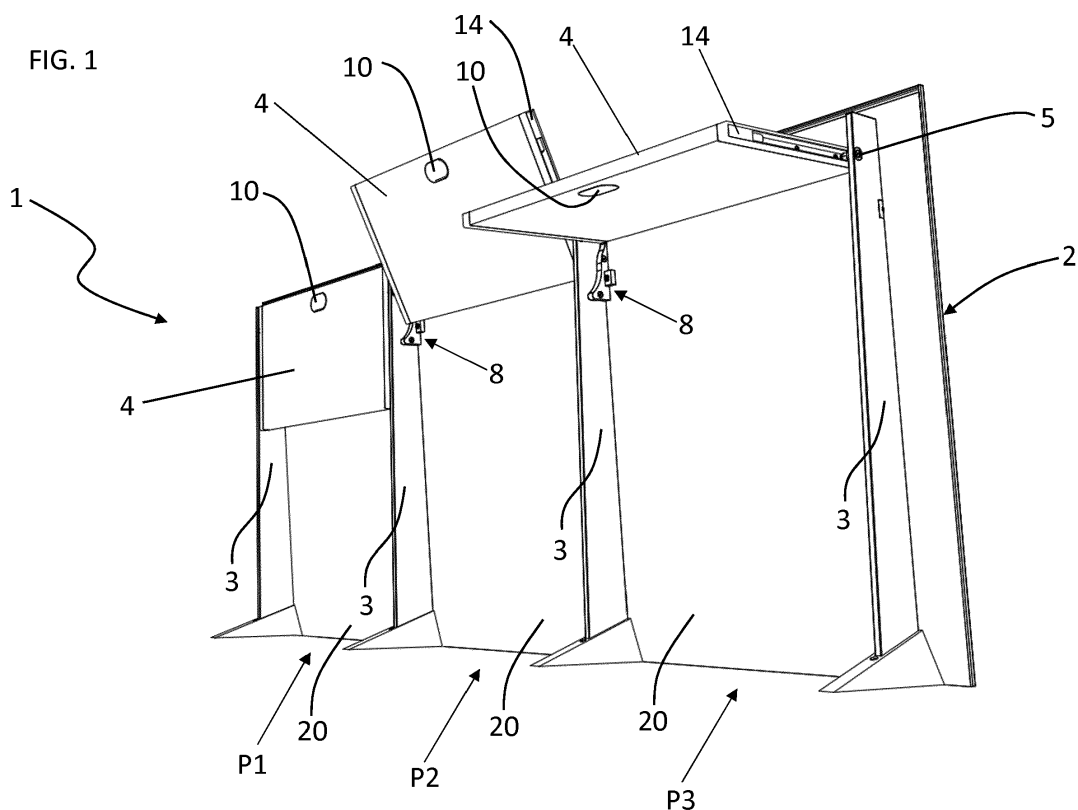
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(30) Priority: **19.10.2016 IT 201600104853**

(54) **DESK FOR AUDITORIUM**

(57) Desk (1) for auditorium, comprising:
a frame (2) having a main extension direction (D);
a plurality of separating plates (3) constrained to the frame (2) and arranged so as to delimit a plurality of adjacent stations (P1, P2, P3),

a tiltable table (4) being present in each station (P1, P2, P3) which, during tilting thereof, slides on two blocks (8) having a partly undulating profile and, once the tilting has been completed, abuts on an abutment (9) projecting from the frame (2).



Description

[0001] The present invention relates to a desk for auditorium.

[0002] For example, the desk of the present invention can be used in conference rooms, university lecture theatres or multi-use rooms.

[0003] Various integrated and continuous desk solutions are known for auditoriums, which can be assembled in a straight line or a curved line, on large steps or on inclined and/or flat floors.

[0004] Each intermediate row has a desk on which a plurality of seating and writing stations or sites are fashioned.

[0005] The first row, instead, has a desk formed only by writing stations.

[0006] The last row has a desk formed only by seating stations.

[0007] In this context, the attention is focalised entirely on the writing stations.

[0008] In the known solutions, the desk has a number of tables that is equal to the writing stations. The tables can be fixed or tiltable (independently of one another).

[0009] In the known solutions, for each writing station, the corresponding table is slidably associated to two lateral uprights. In particular, blind slots having a longitudinal extension are obtained on two opposite lateral surfaces of the table. The table is constrained to two pins: one on each lateral upright. Each pin can slide in one of the two blind slots.

[0010] To open the table, i.e. tilting the table up to being brought into the writing configuration, the table must be translated upwardly, associated to a partial rotation. During this movement the pins (fixed) slide in the blind slots of the table (in movement).

[0011] When the table closed, the above sequence is performed in reverse, by sliding the pins (fixed) in the blind slots of the table (in movement).

[0012] The tables, while being arranged one following another, are however spaced. This spacing is linked to two factors:

- each table must be moved independently with respect to the adjacent tables, so it is necessary to provide a space between adjacent tables with the purpose of preventing interferences;
- each table is associated to two uprights dedicated thereto, so that each upright is spaced from the upright of the immediately successive table.

[0013] While on the first factor has no margin for intervention (a tolerance is necessary for preventing obstructions and/or wear in the lateral surfaces of the tables), it would be wise to intervene on the second factor so as to reduce the "dead" spaces and increase, if possible, the number of stations for each row.

[0014] In this context, the technical task underpinning the present invention is to provide a desk for auditorium

which obviates the drawbacks in the prior art as described above.

[0015] In particular, an object of the present invention is to provide a desk for auditorium that is more compact and has an organisation of the stations that is optimised with respect to the prior art solutions.

[0016] The stated technical task and specified aims are substantially achieved by a desk for auditorium, comprising:

- a frame having a main extension direction;
- a plurality of separating plates constrained to the frame and arranged so as to delimit a plurality of adjacent stations;
- a plurality of tables, each of which is situated at a station;
- means for tilting each table independently with respect to the frame, so that the desk can pass from a rest configuration, in which it is folded against the frame, to a working configuration in which it is substantially perpendicular to the main extension direction,

characterised in that it comprises, for each station:

- two blocks having a partly undulating profile for guiding the corresponding table during the tilting thereof with respect to the frame, each of the two blocks being constrained to one of the two separating plates of the corresponding station;
- an abutment projecting from the frame, the table in the working configuration abutting on the abutment.

[0017] In a preferred embodiment, the main extension direction is a straight line.

[0018] In a variant embodiment, the main extension direction is a curve.

[0019] The frame preferably comprises a plurality of slabs put side by side along the main extension direction.

[0020] Each slab is associated to a corresponding station. The separating plates are fixed perpendicularly to the slabs.

[0021] The abutment of each station preferably consists of a profiling projecting from the corresponding slab.

[0022] The abutment of each station preferably extends from a separating plate to the other separating plate of the station.

[0023] Two adjacent stations are preferably separated by a single separating plate.

[0024] The means for tilting each table with respect to the frame preferably comprise, for each station, two pins fixed to the separating plates.

[0025] Each table is provided with two blind slots obtained on opposite lateral surfaces of the table and having a longitudinal extension. Each of the two pins is slidably inserted in one of the two blind slots in order to allow a tilting of the table.

[0026] The desk preferably comprises a plurality of

dampers, each of which is situated in one of the blind slots for damping the tilting of each table with respect to the frame in the passage from the working configuration to the rest configuration.

[0027] Further characteristics and advantages of the present invention will become more apparent from the approximate and thus non-limiting description of a preferred, but not exclusive, embodiment of a desk for auditorium, as illustrated in the accompanying drawings, in which:

- figure 1 illustrates a desk for auditorium, according to the present invention, in a perspective view;
- figure 2 illustrates the desk for auditorium of figure 1, in a lateral perspective view;
- figure 3 illustrates the desk for auditorium of figure 1, in which the tables have been removed for reasons of clarity, in a perspective view;
- figure 4 illustrates a table of the desk for auditorium of figure 1, in a perspective view.

[0028] With reference to the figures, number 1 denotes a desk for auditorium, in particular for conference rooms, university lecture theatres or multi-use rooms.

[0029] The desk 1 comprises a frame 2 having a main extension direction D.

[0030] The desk 1 illustrated in figures 1-3 has a linear extension, so the main extension direction D of the frame 2 is a straight line.

[0031] In an alternative embodiment, not illustrated, the desk 1 has an arched extension, so the main extension direction D of the frame 2 is a curve. The desk 1 has a plurality of adjacent stations (or sites) P1, P2, P3 which are delimited by separating plates 3 constrained to the frame 2.

[0032] In the figures, for the sake of simplicity three adjacent stations P1, P2, P3 are illustrated.

[0033] In particular, the separating plates 3 are parallel to one another, project from the frame 2 and subdivide the frame 2 along the main extension direction D.

[0034] A table 4 (i.e. a resting surface) is situated at each stations P1, P2, P3. Means 5 for tilting each table 4 independently with respect to the frame 2 are included. In particular, the table 4 is movable between two "limit" configurations i.e.:

- a rest configuration, in which the table 4 is folded against the frame 2;
- a working configuration, in which the table 4 is substantially perpendicular to the main extension direction D.

[0035] The table 4 preferably has a recess 10 obtained on one of the surfaces having larger extension, with the purpose of facilitating the grip of the table 4 by a user during the tilting thereof with respect to the frame 2.

[0036] The means 5 for tilting comprise, for each station P1, P2, P3, two pins or dowels fixed to the separating

plates 3. As can be seen in figure 3, a pin 5 is fixed to a separating plate 3, and the other pin 5 is fixed to the other separating plate 3 of the same station P1, P2, P3.

[0037] Each table 4 is provided with two blind slots 6 respectively obtained on opposite lateral surfaces 14 of the table 4. Each blind slot 6 has a longitudinal extension.

[0038] For each station P1, P2, P3, each of the two pins 5 is slidably inserted in one of the blind slots 6 of the table 4 in order to allow the tilting of the table 4.

[0039] A damper 7 is advantageously situated in each blind slot 6 for damping the tilting of the corresponding table 4 with respect to the frame 2 during the passage from the working configuration to the rest configuration.

[0040] Two blocks 8 are present for each station P1, P2, P3, having a partly undulating profile for guiding the corresponding table 4 during the tilting thereof with respect to the frame 2.

[0041] Each of the two blocks 8 is constrained to one of the two separating plates 3 of the corresponding station P1, P2, P3.

[0042] In the working configuration thereof, the table 4 advantageously abuts on an abutment 9 projecting from the frame 2.

[0043] The frame 2 preferably comprises a plurality of slabs 20 put side by side along the main extension direction D. The separating plates 3 are fixed perpendicularly to the slabs 20.

[0044] The abutment 9 of each station P1, P2, P3 preferably consists of a profiling projecting from the corresponding slab 20. This profiling 9 more preferably projects perpendicularly with respect to the corresponding slab 20.

[0045] The abutment 9 preferably extends from a separating plate 3 to the other separating plate 3 of the corresponding station P1, P2, P3.

[0046] Both the slabs 20 (with the projecting abutments 9) and the separating plates 3 are preferably made of aluminium. The tables 4 are also preferably made of aluminium.

[0047] Two adjacent stations P1, P2, P3 are advantageously separated by a single separating plate 3.

[0048] In this way, the separating plate 3 bears two pins 5, one for each station P1, P2, P3, projecting from opposite sides of the separating plate 3.

[0049] In the embodiment described and illustrated herein, the slabs 20 are flat. As both flat slabs 20 are put side by side, they appear to be a continuous plane, i.e. without any break in continuity.

[0050] In the alternative embodiment having an arched extension, the slabs 20 are curved. In this case, the curved slabs 20 put side by side appear as a continuous curved profile, i.e. without any break in continuity.

[0051] The operation of the desk for auditorium, according to the present invention, is described in the following with reference to a station.

[0052] Consider, initially, the table 4 in the rest configuration (for example, the table 4 of the station denoted by "P1" in figure 1). In this configuration, the table 4 is

substantially "flush" with the corresponding separating plates 3. By partly inserting his or her fingers in the recesses 10 of the table 4, the user begins to translate the table 4 upwards. During this translation, the pins 5 slide in the respective blind slots 6.

[0053] An intermediate configuration of the table 4 is illustrated in figure 1, with reference to the station "P2".

[0054] When the table 4 abuts the partly undulating profile of the blocks 8, it begins rotating about the pins 5 until it is arranged in the working configuration. In this configuration, the table 4 has completed moving along the undulating profile of the blocks 8 and abuts on the corresponding abutment 9.

[0055] This configuration is illustrated in figure 1, with reference to the station "P3".

[0056] When the table 4 is to be closed, the sequence described in the foregoing is performed in reverse order (i.e. from P3 to P1). Thanks to the presence of the dampers 7, the table 4 is advantageously prevented from being subject to brusque oscillations during closing thereof.

[0057] From the description provided the characteristics of the desk for auditorium according to the present invention are clear, as are the advantages.

[0058] In particular, owing to the fact that the abutment consists in a projecting profiling extending from a separating plate to the other (of the same station), the stability of the open table is better with respect to the known solutions.

[0059] In fact, in the working configuration the table is blocked both inferiorly (by the block) and superiorly (by the abutment). The fact that the abutment extends between the two separating plates enables high stability to be achieved.

[0060] The presence of the dampers means that oscillations or vibrations of the table during return thereof into the rest configuration are damped. This is particularly advantageous as during the closing, the force of gravity tends to accelerate the table downwards, the dampers thus having the function of slowing or damping the acceleration in the final portion.

[0061] Further, owing to the fact that the two adjacent stations are separated by a single separating plate, "dead" spaces between one station and another are eliminated enabling some extra stations to be set up, given a same length of the desk, with respect to the known solutions. In particular, the distance between adjacent tables corresponds to the thickness of the separating plate, with the inclusion of a tolerance.

[0062] Further, the desk is perceived as a single structure, due both to the fact that it is formed of slabs put side by side and to the fact that in the rest configuration the tables are arranged substantially "flush" with the separating plates.

[0063] The desk for auditorium of the present invention is therefore more compact and involves an optimisation of the distribution of the stations with respect to the known solutions.

Claims

1. Desk (1) for auditorium, comprising:

- 5 a frame (2) having a main extension direction (D);
a plurality of separating plates (3) constrained to said frame (2) and
10 arranged so as to delimit a plurality of adjacent stations (P1, P2, P3);
a plurality of tables (4), each of which is situated at one of said stations (P1, P2, P3),
means (5) for tilting each table (4) independently with respect to the frame (2), so that said table (4) can pass from a rest configuration, in which it is folded against the frame (2), to a working configuration in which it is substantially perpendicular to said main extension direction (D),
20 **characterised in that** it comprises, for each station (P1, P2, P3):

two blocks (8) having a partly undulating profile for guiding the corresponding table (4) during the tilting thereof with respect to the frame (2), each of the two blocks (8) being constrained to one of the two separating plates (3) of said station (P1, P2, P3);
an abutment (9) projecting from the frame (2), said table (4) in the working configuration abutting on said abutment (9).

2. Desk (1) according to claim 1, wherein said frame (2) comprises a plurality of slab (20) put side by side along said main extension direction (D), each slab (20) being associated to a corresponding station (P1, P2, P3), said separating plates (3) being orthogonally fixed to said slabs (20).

3. Desk (1) according to claim 2, wherein the abutment (9) of each station (P1, P2, P3) consists of a profiling projecting from the corresponding slab (20).

4. Desk (1) according to any one of the preceding claims, wherein the abutment (9) of each station (P1, P2, P3) extends from a separating plate (3) to the other separating plate (3) of said station (P1, P2, P3).

5. Desk (1) according to any one of the preceding claims, wherein two adjacent stations (P1, P2, P3) are separated by a single separating plate (3).

6. Desk (1) according to any one of the preceding claims, wherein said means (5) for tilting each table (4) with respect to the frame (2) comprise, for each station (P1, P2, P3), two pins (5) fixed to the separating plates (3), the corresponding table (4) being provided with two blind slots (6) obtained on opposite lateral surfaces (14) of the table (4) and having a

longitudinal extension, each of the two pins (5) being slidably inserted in one of said blind slots (6) in order to allow a tilting of the table (4).

7. Desk (1) according to claim 6, comprising a plurality of dampers (7), each of which is situated in one of the blind slots (6) for damping the tilting of each table (4) with respect to the frame (2) in the passage from the working configuration to the rest configuration. 5
8. Desk (1) according to any one of the preceding claims, wherein said main extension direction (D) is a straight line. 10
9. Desk (1) according to claims 1 to 7, wherein said main extension direction (D) is a curve. 15

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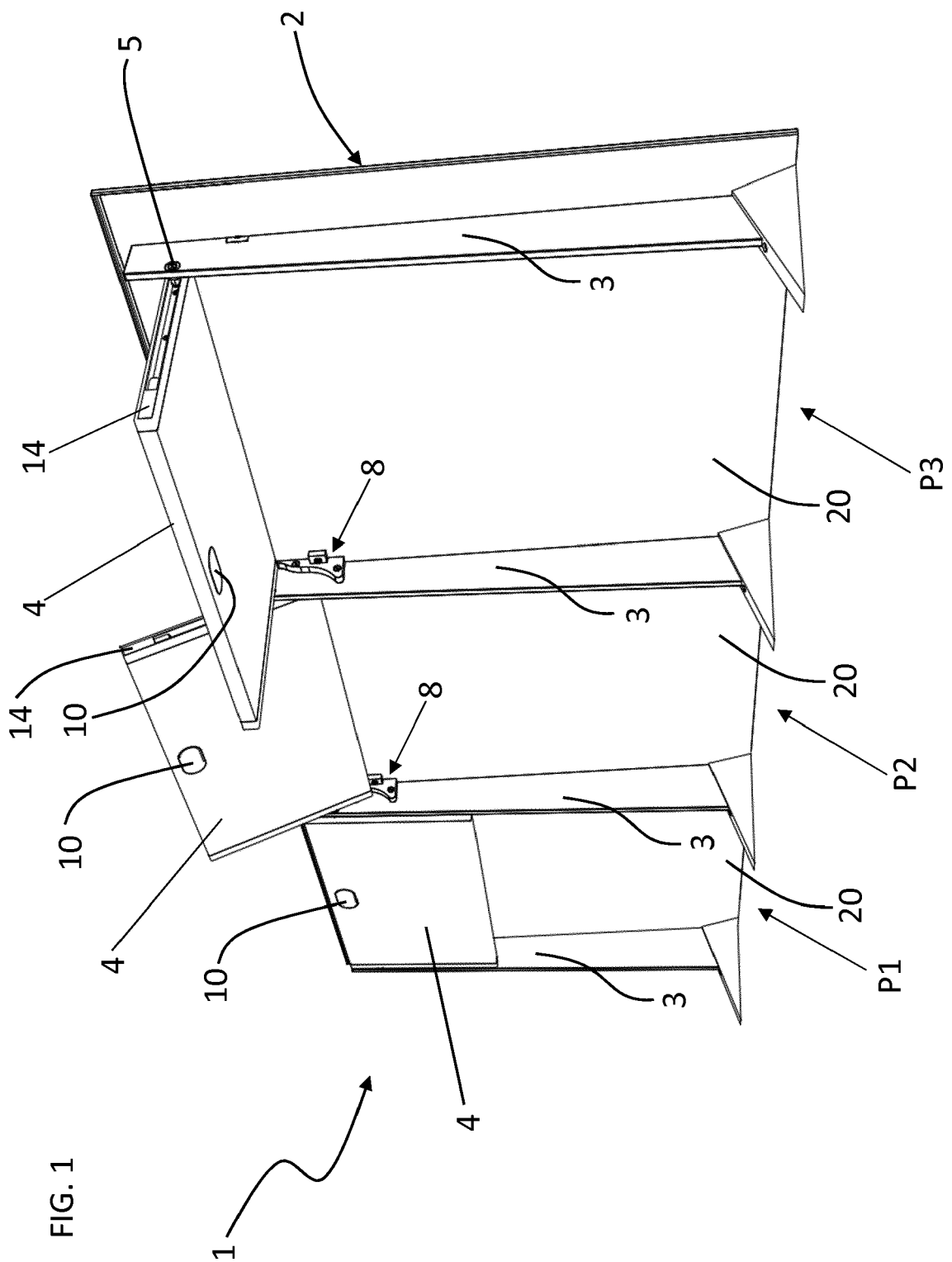
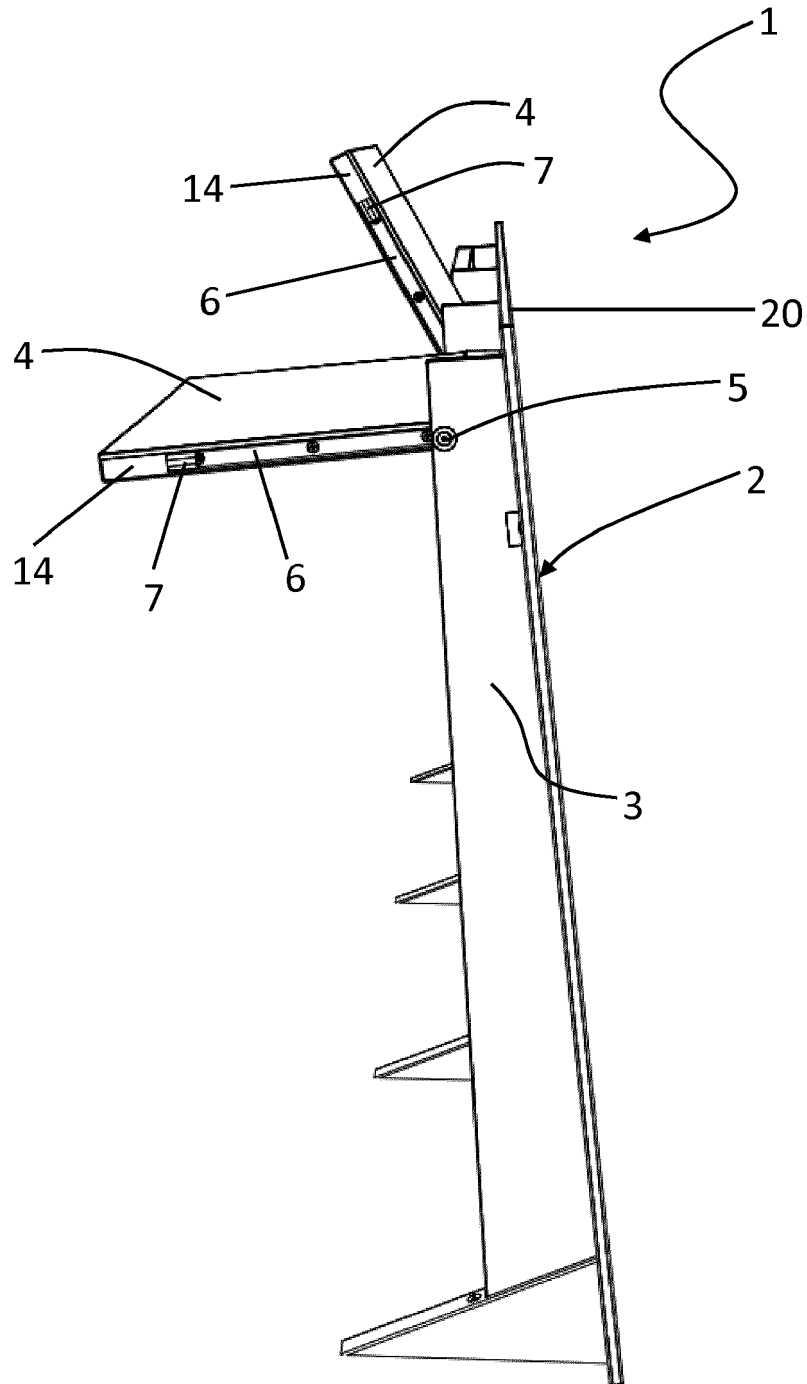


FIG. 2



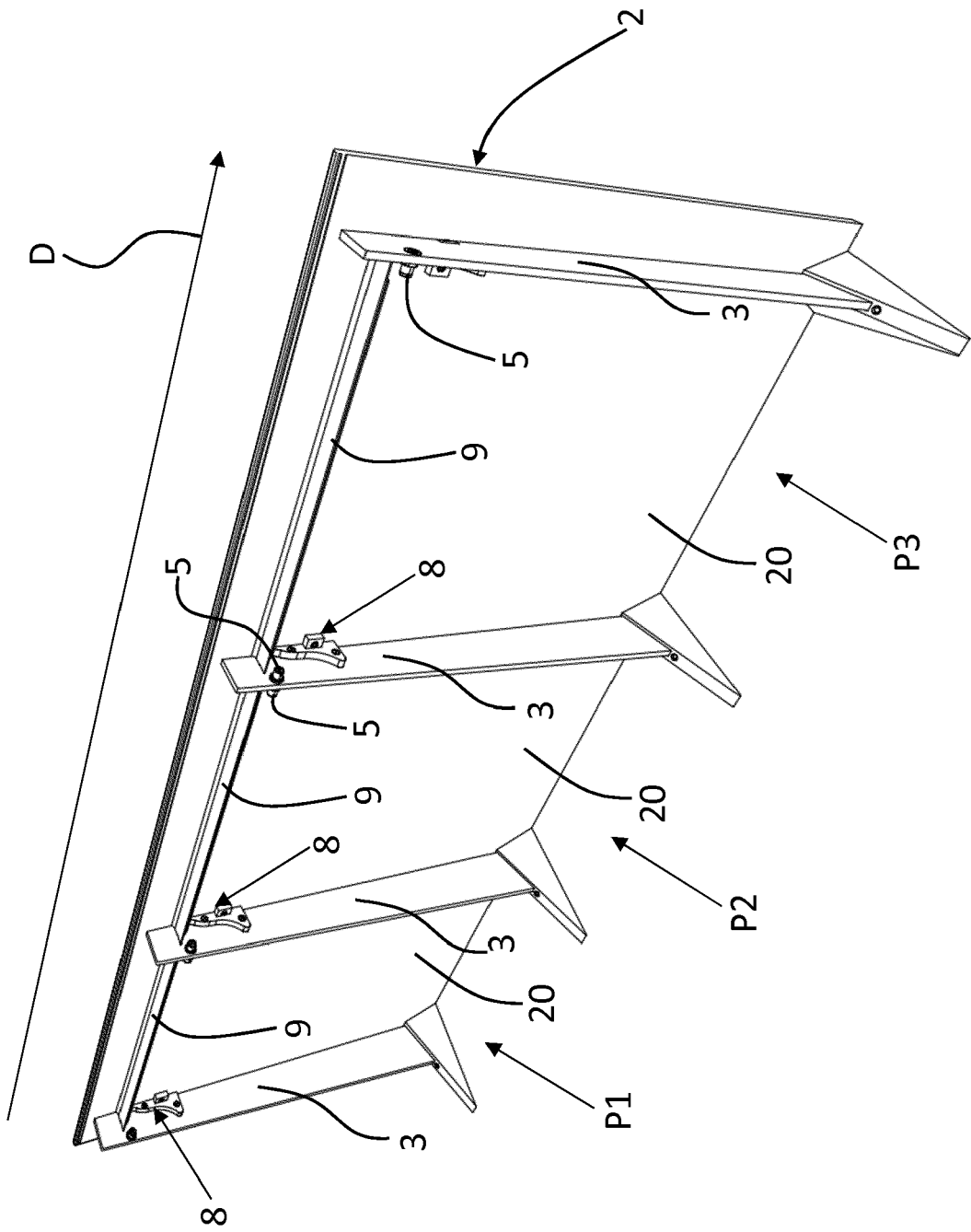
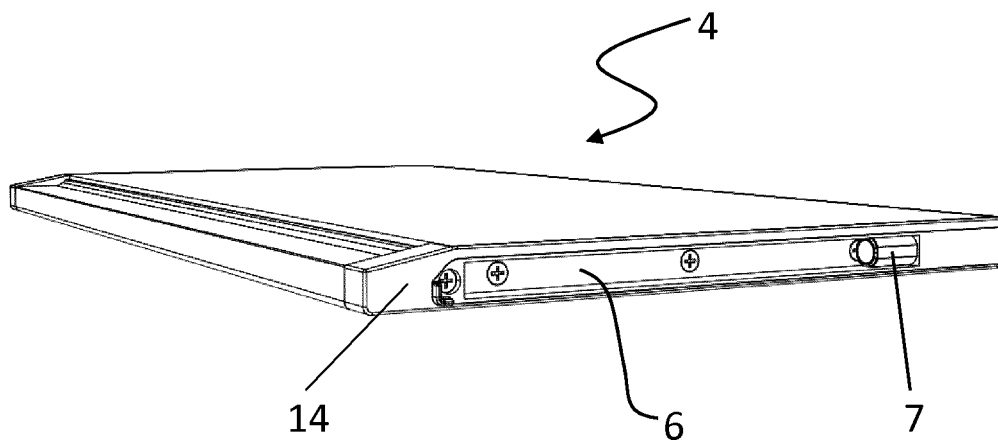


FIG. 3

FIG. 4





EUROPEAN SEARCH REPORT

Application Number
EP 17 18 4016

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	CZ 13 831 U1 (SOUCEK JAN [CZ]; ZOUHAR NORBERT [CZ]) 14 January 2004 (2004-01-14) * figures 1-2 *	1	INV. A47B5/04
A	CH 208 163 A (BECKER EMIL [DE]) 15 January 1940 (1940-01-15) * column 1, line 22 - column 2, line 40; figures 1-2 *	1-9	
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			TECHNICAL FIELDS SEARCHED (IPC)
			A47B
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 17 January 2018	Examiner Kohler, Pierre
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03/02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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